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ABSTRACT

In 1991, a study was undertaken to determine the relationship between stress and job satisfaction among community college faculty in Pennsylvania. All full-time faculty at the state's 14 two-year community colleges were surveyed using the Faculty Stress Index, the Minnesota Job Satisfaction Questionnaire, and the Framingham Type A Scale. Selected findings, based on a final response rate of 61.4%, included the following: (1) female faculty members had significantly higher levels of overall stress and a slightly higher level of job demand stress than males; (2) though a greater proportion of female faculty did not have tenure, no significant interactive effects were found between gender and tenure status on stress level; (3) no significant differences were found between "hard" and "soft" academic disciplines; (4) faculty with a type A personality orientation had significantly higher stress levels than type B faculty; (5) three variables (i.e., total stress level, gender, and the first-order interaction of academic department and gender) were statistically significant components of job satisfaction, while two factors (i.e., being female and total level of stress) were negatively correlated to job satisfaction; and (6) as a whole, the faculty were fairly neutral relative to their overall job satisfaction. Specific strategies to help administrators address problems related to high job demand on faculty, and to help faculty reduce levels of stress and manage its effects are included. A review of related literature is also provided. (JMC)

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STRESS, JOB SATISFACTION AND THE COMMUNITY COLLEGE FACULTY

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Introduction

With the increasing changes and redirecting of American education, new pressures and demands are being made on the work environment of community college faculty. Some contend the additional demands on faculty time and the conflicts arising from instructional change have created a situation of potential increased stress and anxiety on the part of many community college faculty members (Alfred, 1986).

As continued changes in academic life impact on the individual faculty member, potential conflicts arise between what is and what should be. These conflicts were described by Ames and Watkins (1983) as the "shadow side of teaching." One potential impact of this phenomenon on an institution may be a decline in faculty job satisfaction and individual performance and thus ultimately on the institution's effectiveness in achieving its mission.

Wood (1976) reported that job satisfaction plays an important role in faculty job performance and the effectiveness of the institution. As an employment performance problem, stress and anxiety may reduce productivity and limit the overall effectiveness of the faculty members to contribute to the institution (Sweeney, 1982).

Hunter, Crow, Beach and Ventimiglia (1983) suggested overall job satisfaction appears to be high, but warned that specific factors seem to reoccur in the literature which point to peripheral sources of stress surrounding the instructional process which are tied directly to the educational environment. Milosheff (1990) reported community college faculty are relatively satisfied,and faculty members enjoy working with their colleagues and functioning as a contributing member of a quality institution. Earlier Alfred (1986) reported that community college faculty are becoming alienated from their profession due to personal professional development conflicts and rapid institutional changes. Burke (1976) stated "certain types of occupational stress, primarily associated with enlarged or demanding jobs, were negatively related to job satisfaction" (p. 235).

It has been suggested that work demands directly associated with the developmental needs of students have become a primary function for the community colleges. Such demands are found to impact adversely on job satisfaction; therefore, faculty development programs must be developed to address these demands. The Carnegie Foundation (1984) also identified similar factors associated with low job satisfaction and increasing work stress. Burke (1976) suggested that as occupational stressors (i.e., job demand, role conflict) increase, the probability that a person will become dissatisfied with his/her job increases.

The relationships between organizational stress and job satisfaction were conceptualized by Price (1970), and more recently by Igodan and Newcomb (1986), as having two components--conflict stress and structural stress. Conflict stress being conflicting demands made on teachers and structural stress the degree to which the organizational structure of the institution makes it difficult to teach. Price reported that job conflict played a significant role in job stress. Kanter (1979) and Harnish and Creamer (1986) indicated that faculty were frustrated with regard to professional growth opportunities and the lack of career ladders providing opportunities for advancement within the organization.

Karasek (1979) suggested that it is a combination of low decision latitude and heavy job demands which are associated with job dissatisfaction. He postulated that stress results from the joint efforts of the demands of a work situation and the range of decision making. This is supported by Seidman (1987) who indicated that problems of time and how it is spent continue to plague the work of community college faculty.

It thus seems timely to examine the potential sources of stress for community college faculty and their relationship with the community college faculty member's job satisfaction.

Research Questions Examined

This paper focuses on specific aspects of a larger study examining Pennsylvania community college faculty. The following general research questions are addressed in this report.

1. What are the major sources of stress (stressors) for community college faculty and what level of stress do they report for the respective stressors?

2. How do the levels of stress differ for the respective stressors when examined for the following subgroups of community college faculty: (a) gender of faculty, (b) tenure status, (c) discipline area, and (d) personality type (A vs B).

3. What is the level of job satisfaction for Pennsylvania community college faculty and what is its relationship with the levels of stress?

Selected Related Literature

General Conceptual Framework

From the macro-level perspective, this study was conceptualized within the job performance framework most recently revised by Waldman and Spangler (1989). The seminal work in the 1950s related to job performance postulated that a faculty member's performance was a function of individual ability and motivation. Subsequently job performance came to be viewed as a multi-dimensional concept which included individual and organizational factors. Sometimes these factors have also been referred to as ability factors, motivational factors and opportunity (work environment) factors. More recently Waldman and Spangler have proposed an integrated performance model (Figure 1) in which three types (classes) of variables were identified--namely, individual determinants, contextual work environment determinants and performance outcome variables.

Within the integrated model, contextual work environment variables such as job complexity, group process, leader behavior and beliefs, to name several, appear to interact with individual (personal) factors to influence performance and subsequently individual outcomes. With that framework as a background, the investigators attempted to incorporate the findings of Gmelch (1988) and Heath (1981) into a perspective at the individual faculty member level (micro-level). Gmelch reported during the 1988 AERA conference that college faculty around the world were "dissatisfied with work environments, disillusioned with career decisions and

exhibiting stress emanating from various aspects of their professional roles" (p. 1). At the same conference Smart (1988) reported that job satisfaction was correlated to faculty intentions to leave their institution.

At the micro-level the investigators adopted the stress process developed by Israel et al. (1989). Especially valuable in their framework is the theoretical influence of individual and situational variables on stressors (sources of stress) and on outcomes, especially psychological outcomes such as satisfaction. Recent work by Thoreson (1990), Harvell and Ammentorp (1989) and Ethington et al. (1989) further substantiates the examination of sources and levels of stress and job satisfaction by inclusion of individual and situational characteristic variables (Figure 2) such as personality factors, gender and discipline area. Recent writings also examined the phenomenon of job satisfaction in higher education (Walker & Kuk, 1990), and the aspect of stress and burnout for women in higher education (Farr, 1990).

For the individual, including professional educators, personality type and adult development play a key role in life stress situations. All adults develop through a series of life stages accompanied by sustained periods of stress--some good, some bad. Duncan and McCombs (1982) stated that "in stable periods a life structure is built; in the transitions, what has been built is reappraised. Reappraisal is a result of internal conflicts, such as ego need and external conflicts" (p. 26). How faculty handle these changes and conflicts, with regard to their personality, will determine to what level stress occurs and how it affects one's job satisfaction.

If the conflict which occurs within the environment is not addressed, then situations develop, usually with small signals that, when unheeded, can progress starting as stress and resulting in the impairment or destruction of the motivation towards work (burnout) (Igodan & Newcomb, 1986). Potter (1981) stated that burnout is a cumulative process, beginning with stress signals which, if unheeded, can progress into a profound and lasting dread of work. Thus, occupational and environmental conflicts are the beginning of burnout, while extreme job dissatisfaction, poor performance and dread of one's job is the end result.

Sources of Stress

Specific factors which create stress for the community college faculty are those factors associated with job demands (time), clarity of institutional mission, and the effects of social change as it impacts on institutional effectiveness. The presumed common bond between all faculty at the community college is their attraction to a college which characterizes itself as a teaching institution. Garrison (1967) reported in a major report of community college faculties that:

> There is not enough time . . . to keep up in my field; to develop innovations or new methods in my own teaching; to do a proper job with individual students; to investigate what other colleges are doing; to study for myself; to discuss educational matters with my fellow teachers; to do a decent job of preparation for my classes; to refresh myself with brief associations with my colleagues in my own discipline. (p. 21)

These concerns support the need for more time for scholarship, collegiality, and greater student interaction. They are also supported by the work of Seidman (1987) and Alfred (1986) who described conflicts due to environmental changes and a lack of scholarship. Seidman (1987) reported that the need for renewal and scholarly activity on the part of faculty cuts across rank, curricula, gender, and race. What has become very clear is that today's community college faculty see continued education and learning as an issue of power and opportunity.

Without clear expectations and goals faculty see little opportunity and tend to lose their perspective on learning. They become "tenets" within the institution to the extent that (a) they do not participate fully in strategic decisions about programs, finances and students, (b) they maintain limited interaction with students outside the classroom, and (c) they engage in other personal and professional interests outside the college which limits the time and energy spent on instructional activities (Alfred, 1986). Such conflict with one's expectations and the realities of the job create stress and alienation.

Evidence regarding the erosion in job satisfaction is seen when we examine the data by two- and four-year institutions. When asked about the potential for advancement, 27% of the faculty from four-year institutions said such opportunities are limited and they felt "trapped" in

their profession (Carnegie Foundation, 1984). In two-year institutions, almost 30% indicated they considered another profession. Cohen and Brawer (1972) found that university faculty appear to be the reference group for many community college faculty, as nearly 50% of community college teachers reported preferring to teach in a four-year institution. They went on to state the degree of satisfaction with the teaching profession in general and the institution in particular was the major determinant regarding one's decision to change positions.

When approached on the issue of morale and institutional climate, about 40% of the respondents said it was worse today than five years ago. Surprisingly, one-fifth of all faculty reported that if they had it to do over again, they would not become college teachers (Carnegie Foundation, 1984).

These data show a restlessness and magnitude of dissatisfaction perhaps not seen before in the ranks of the higher education profession. Much of it can be attributed to drastic changes in academic life from 1970 to 1983 such as increased competition, sharp declines in real income, deteriorating work climate, unrealistic expectations, long work hours, and an unfavorable labor market. These factors have been documented as specific areas of stress for faculty in postsecondary institutions. Gmelch, Lovrich and Wilke (1984) found that 60% of the total stress in the faculty members' lives comes from their work and the majority of the stress is related directly to limited time or limited resources.

Job Satisfaction and Stress

In the education profession, increased emphasis on disengagement and career shifting have caused an increasing awareness of the importance of personal satisfaction and fulfillment with work. Riday, Bingham and Harvey (1984) indicated that the job satisfaction of teachers at all levels has important implications both for teachers and the entire educational enterprise. "Satisfaction is a function of the correspondence between the reinforcer system of the work environment and the individual's needs, provided that the individual's abilities correspond with the ability requirements of the work environment" (Lofquist & Dawis, 1969). Hunter, Crow,

Beach and Ventimiglia (1983) suggested that "job satisfaction refers to a particular job. . . . To be satisfied is to have pleasurable or positive feelings toward one's work" (p. 108).

In higher education the general consensus is that job satisfaction appears to be high (Kanter, 1979). In their study on satisfaction of community college faculty, Riday, Bingham and Harvey (1984) concluded that community college faculty are highly satisfied with their jobs, and that four-year faculty are only moderately satisfied. This correlates with earlier work including recent research on job satisfaction and role clarity conducted by Locke, Fitzpatrick and White (1984). However, Alfred (1986) reported that community college faculty are becoming alienated from their profession due to personal professional development conflicts and rapid institutional changes. Cohen and Friedlander (1980) summarized several studies on job satisfaction in the community colleges and concluded that faculty perceptions of their role and working condition had shifted to a more positive view of the legitimacy and purpose of the two-year postsecondary institution.

Hunter et al. (1983) suggested overall job satisfaction in higher education appears to be high, but warned that specific factors seem to reoccur in the literature which point to peripheral stress factors surrounding the instructional process which are tied directly to the educational environment. Burke (1976) stated that "certain types of occupational stress, primarily associated with enlarged or demanding jobs, were negatively related to job satisfaction and that the greater the stress, the lower the job satisfaction" (p. 235).

> The presence of specific occupational stresses, as well as the total amount of occupational stress, was significantly related to job satisfaction (.26, $p<.01$, two-tailed test). The correlation between the occupational stress index used and the job satisfaction index were also statistically significant. Thus, the greater the extent to which the respondent reported the presence of occupational stresses, the lower was their job satisfaction. (Burke, p. 239)

Burke's research is substantiated by Newcomb and Clark (1985) who found that burnout is highly correlated with job satisfaction, and that four-year college faculty are sufficiently dissatisfied with advancement, policy and administration, recognition, salary, supervision, and working conditions to suggest the need for action.

The job stress literature revealed that employee satisfaction and stress are attributable to many different kinds of conditions within the work environment (Gmelch, Lovrich & Wilke, 1984). The job environment has been found to be central in the experience of stress among adults; for education professionals it is estimated that 60% of the stress experienced is work related. The pattern of stress may vary across disciplines, but the fact remains that the education profession enhances the experiences of stress.

In the Carnegie Foundation (1984) survey faculty were asked to rate their satisfaction level on a variety of issues facing the different types of postsecondary institutions. In examining the personal characteristics of the most and least satisfied faculty members, only a few percentage points separated the most satisfied from the least satisfied. The data revealed that older faculty members are more settled and less anxious than younger faculty regarding job security and their future. Much of this may have to do with personal life stages and seniority within the organization.

With regard to gender, the results from the Carnegie study indicates the percentage of men who are most satisfied (35%) exceeds that of women (32%). This suggests there is still a sense of unequal treatment among women, and somewhat more stress for women in the educational work place. There are mixed results relative to job satisfaction and stress for community college faculty. Milosheff (1990) reported that gender was not a significant variable in accounting for the variance in job satisfaction. Previously Hilton and Jobe (1985) found women more satisfied with work than their male community college counterparts.

The last of the job satisfaction major concerns is job security as represented by tenure. It appears that faculty perceptions of job security relate, in part, to their feeling of the financial health of their institution and the ability to achieve tenure within the system. The most satisfied were less likely to agree that it is more difficult to achieve tenure than it was five years ago, but the least satisfied saw this as a key issue in job security and a reason for stress. Finally, it is interesting to note that, with regard to work overload, displeasure with course overload was

expressed in fairly high percentages for both the most satisfied (SI%) and least satisfied (73%) groups (Carnegie Foundation, 1984).

Those individuals who find themselves dissatisfied by organizational restraints, contrasted to personal concerns, create an internal conflict with regard to what the organization requires and what they are able to provide. As such, conflicts surface between the individual and the organization. These conflicts develop into stress related factors which affect job satisfaction. Burke (1976) suggested that as occupational stressors, such as role conflict and role ambiguity increase, the probability that a person will become dissatisfied with his/her role increases. This is substantiated by Schwab and Iwanicki (1982) who reported that studies by Kahn have found that role conflict and role ambiguity significantly affect job satisfaction.

The relationship between organizational stress and job satisfaction was conceptualized by Price (1970) into two components: conflict stress and structural stress. Price reported that only conflict stress was significantly related to indicators of job stress.

The resultant affects of many sets of conflicting roles, for which the individual must compensate, are increasing periods of stress (Coser & Coser, 1974; Slater, 1963; Snoek, 1966). The assumption then can be made that time and energy to accomplish one's task are not limitless, and as too many demands are imposed on individuals they tend to become distressed. Higher education is not immune to such patterns. Hence, the role for the individual within the institution consists of the part he/she plays in the complete pattern of action and their adaptation to that role (Melendez & deGuzman, 1983).

Karasek (1979) in his research suggested that a combination of low decision latitude and heavy job demands are associated with mental stress and job dissatisfaction. He postulated that stress results not from a single aspect of work, but from the joint effects of the demands of a work situation and the range of decision making. This points to the logical suggestion that greater autonomy for faculty could reduce such stress, but it must also be considered that the extremes of decision latitude could also create situations of stress.

Time urgency and work overload appear in the research continually as sources of occupational stress in academia. Faculty appear to suffer from low self-esteem and poor job performance because they are unable to cope with the heavy work load and lack of adequate time to complete tasks (French, Tupper & Mueller, 1965). This appears to be of major concern to those personality types who need adequate time to perform at the level they regard as adequate rather than substituting less adequate levels of performance for the same task. Subjects conditioned to overload demonstrate significant differences regarding job satisfaction. Those who are most dissatisfied in this regard have shown greater signs of stress, due to compromises in their level of performance (Melendez & deGuzman, 1983).

It appears that men and women do not differ in the amount of overall job satisfaction, but women were found to be less satisfied than men with the amount of time and energy their job required of them. This is supported by the research compiled by the Carnegie Foundation (1984). Burnout among women was found to be less severe in situations where feelings were expressed openly, work tasks shared, and solid, satisfying personal relationships prevailed (Melendez & deGuzman, 1983).

Personality Types Which Influence Faculty Stress and Job Satisfaction

Research has found that certain personality types along with specific environmental conditions (stressors) will produce conflicts and, if uncontrolled, will contribute to the appearance of job burnout symptoms and job dissatisfaction. Melendez and deGuzman (1983) reported that stress is not just something aroused by the environment, such as the work place, but has to do with the individual's inner makeup and how one's personality interacts with that environment.

Many personal characteristics frequently associated with successful performance in the work area have been found to be very similar to behaviors which are part of the Type A behavior patterns, such as job involvement, competitiveness, self control, self confidence and an orientation toward achievement (Friedman & Rosenman, 1974). The individual exhibiting

the Type A behavior pattern is characterized as being extremely hard driving, competitive, highly achievement oriented, work involved, and engrossed in the chronic struggle to accomplish more and more in less and less time. Friedman and Rosenman described this as an action-emotion construct and stated, from their research, that Type A individuals differ from Type Bs by demonstrating the inverse type of behavior patterns. They found that:

> As an action-emotion complex, Type A behavior can be observed in any person who is aggressively involved in a chronic incessant struggle to achieve more and more in less and less time, and if required to do so, against the opposing efforts of other things or other persons. It is not psychosis or a complex of worries or fear or phobias or obsessions, but a socially acceptable--indeed often praised form of conflict. Persons possessing this pattern also are quite prone to exhibiting a free-floating but extra-ordinarily well rationalized hostility. As might be expected, there are degrees in the intensity of this behavior pattern. Moreover, because the pattern represents the reaction that takes place when particular personality traits of an affected individual are challenged or aroused by a specific environmental agent, the result of this reaction may not be felt or exhibited by him if he happens to be in or confronted by an environment that presents no challenge. (p. 67)

The distribution of the Type A behavior pattern is not a true dichotomy between Type A or Type B patterns, but rather represents a continuum of characteristics wherein even the most extreme Type A or Type B individuals possess some characteristics of the opposite type (Friedman & Rosenman, 1974; Glass, 1977). The research strongly suggested that when many individuals enter service and managerial occupations, they do not necessarily possess Type A behavior pattern, but due to specific job pressures and demands, characteristics of a Type A pattern manifest themselves in one's behavior.

Thurman's (1985) research suggested that higher education faculty are high-risk groups for the development and/or maintenance of a Type A behavior pattern. The work environment they typically face (publishing research, teaching, advising, serving on committees, public relations, etc.) can engender feelings and needs which create such behavior. He stated that "the emphasis on competitive achievement striving, within the academic community, lends itself to the elicitation of Type A behavior among faculty, making them a high need group for intervention designed to reduce stress" (p. 75).

If stress is not dealt with in a satisfactory way, through personal knowledge (cognition) and perceptual appraisal of that which causes stress, then a profound dread of work (burnout) can occur. It is the individual's perception of a situation and how he/she reacts to it, referred to as the "cognitive appraisal," that defines the situation as stressful (Lazarus, 1971; Thurman, 1985). Friedman and Rosenman (1974) suggested that "the critical variable in the research on Type A behavior is the person's interpretation of the environmental stimuli" (p. 325). It is suggested then that type A behavior not only results from, but may be stimulated by, the person's maladaptive interpretations of environmental stimuli (Smith & Brehm, 1981; Thurman, 1982).

Stress, then, can be viewed with regard to a Type A behavior pattern as the incongruence of fit between the person and his environment. Therefore, the greater the incongruence of fit, the more significant the level of experienced stress (Lofquist & Dawis, 1969; Marshall & Cooper, 1978). This person-environmental fit model, which helps to explain the pathways of stress with regard to personality, is explained by French (1982) as:

> A descendent of Darwin's theories regarding "survival of the fittest." Survival theories explain that an animal's "fight or flight" reaction produces biochemical changes preparatory to action, but in humans this action may be inappropriate to the social environment and must be inhibited. Such inhibitions may lead to symptoms of frustration, strain (unhealthy responses), anxiety, worry, or high blood pressure which are in themselves attempts to survive the stress factors perceived in the environment. (p. 4)

Therefore, stressors in the work situation perceived as being sources of most stress usually lead to a decreased level of perceived control. Glass (1977), for example, found that Type As seem to increase their efforts when faced with a moderate lack of control. This effort to exert control is termed "hyperresponsiveness" and is found to be more extreme in Type As, who perceive losing control as more threatening than Type Bs. This is an example of control conflict, i.e., conflict between preferred and actual available control which is a result of occupational stress situations. These control conflicts, if not addressed in some way, begin to affect motivation levels of the individual. This becomes important because it is motivation and

how stress affects it that affects the individual job performance. Potter (1981) reported that as individuals become stifled or burned out their motivation is impaired or destroyed altogether.

With regard to job satisfaction, it has been found that Type As tend to be less satisfied with their job than Type Bs (Howard, Cunningham & Rechitzer, 1977). They appear to work longer hours and become more involved in their work. Job conditions, such as supervisory responsibilities for people, feelings of competition in work, heavy work loads and conflicting demands appear to elicit Type A behavior patterns. It is also noted that on the whole Type As earn higher salaries than Type Bs.

These findings are subject to some controversy because there is so little research in this area, and studies do not provide an unequivocal explanation for any lack of Type A--satisfaction relationship found elsewhere. Matteson, Ivancevich and Smith (1984) stated:

> It may be that the Type A behavior pattern is simply not an important influence of job satisfaction. The attempts to link personality-type variables to general measures of job satisfaction has been only moderately successful. Type A behavior may fall into a larger category of variables that are not related in any consistent significant way to measures of satisfaction. On the other hand, significant relationships may exist among certain groups or among certain types of occupations that are not included in current research. (p. 211)

Although current research in this area has not shown significant differences between personality type and job satisfaction, there is a slight indication that Type As may be less satisfied with their jobs. Howard et al. (1977) gave two explanations for this: "Either Type A's are in less satisfying jobs or else job dissatisfaction is a part of the personality gestalt of individuals susceptible to Type A behavior" (p. 827).

The association between Type A behavior and stress appears to be more clear. Matteson, Ivancevich and Smith (1984) found from their research that Type As are by nature "stress seekers"; they tend to seek out environments in which stressors are prevalent. They went on to state that while Type As experience more stress, it can be interpreted that they have a greater need for stress in their lives. This does not negate the dysfunctional consequences of that stress. Their conclusions indicated that Type A personalities report different degrees of

stress than do their Type B counterparts. Thus, the interpretation of stressful conditions by one group may be incongruent with those of another.

With regard to sex, Type A behavior has been found to be twice as prevalent in men than women; women found in the work place are more likely to be Type A personalities and subject to stress than nonworking women. Friedman and Rosenman (1974) found a strong association between Type A behavior and health related problems in both men and women. Stress related problems are equally associated with both men and women. Unlike men, however, women show signs of maximum Type A behavior at an earlier age (30 to 35).

Environmental Dimensions of Stress

Research on job-related stress documents a wide range of diverse work place stressors or dimensions of stress which have been generalized to academic settings (Gmelch, Wilke & Lovrich, 1983). Specific stressors have been identified which increase stress levels for postsecondary faculty and, if left unresolved, lead to burnout (Cohen & Friedlander, 1980; Hunter et al., 1983; Kyriacou & Sutcliffe, 1978; Schwab & Iwaniki, 1982). These work place stressors can be categorized within the areas of:

1. Working conditions (demands on teaching, research and service).
2. Time pressures (too many duties in too little time).
3. Autonomy (inadequate freedom to pursue and render judgment regarding professional development).
4. Collegiality (need to interact with colleagues and administrators).
5. Growth and upward mobility (the need to grow and be challenged in one's job).
6. Administrative attitudes (lack of recognition and understanding of employee needs, lack of communication and group interaction).
7. Role conflicts and role ambiguities (occurrence of two or more sets of inconsistent expected behaviors, lack of clear information regarding duties and responsibilities).

Clagett (1980), in his research with 218 individuals, identified six stress classifications: administration, student related, peer related, financial, working conditions, and personal pressures. This work closely parallels the finding of Gmelch, Wilke and Lovrich (1985) who, through factor analysis on 45 stress items, indicated the presence of five distinct dimensions of perceived stressful conditions in academia. These factors were:

1. Reward and recognition (professional recognition and rewards, inadequate rewards, unclear expectations, and insufficient recognition).

2. Time constraints (work related duties, e.g., paperwork, meetings, telephone and visitor interruptions).

3. Departmental influence (resolving differences, knowing evaluation criteria, influencing decisions).

4. Professional identity (presentations at professional meetings, excessively high self expectations, professional reputation).

5. Student interaction (instruction, evaluation, advising, etc.).

This supports the earlier patterns of academic stress found in Clark's (1974) study and the work of Gmelch et al. in 1983. Their findings related stress to high self expectations, excessive time constraints and inadequate resources. Similar studies have identified self doubt, inadequate organizational resources, and serious time constraints as major sources of academic stress (Hunter et al., 1980; Shull, 1972).

In a recent national study regarding the source of stress among higher education faculty, Gmelch, Lovrich and Wilke (1984) indicated the ten most stressful situations in academia are (a) excessively high self expectations, (b) obtaining financial support for research, (c) insufficient time to stay abreast of information in one's field, (d) low salary, (e) striving for publication, (f) feeling continually over-loaded, (g) job demands, (h) lack of purpose in one's career, (i) interruptions, and (j) meetings.

These sources appear to be the major factors of stress perceived by postsecondary education faculty. The Carnegie Foundation Survey (1984) identified other closely related

factors which foster stress and are related to job satisfaction. They included (a) economic reward (salaries), (b) type of institution where faculty work (climate), (c) participation in decision making (autonomy), (d) work load and job participation, (e) job security (tenure), and (f) financial strength of the institution. These Carnegie results correlate closely with the work of others (Hunter et al., 1983; Shuster & Bowen, 1985; Watkins, 1986) who found that the current state of faculty in institutions of higher education is very fluid and that quality is slowly being sacrificed for other, more pressing, problems. One's inability to respond to a perceived demand and the anticipation of a negative consequence for an inadequate response produces major conflicts perceived as stressful.

Methodology

The study used descriptive survey research methodology. The survey questionnaire included three distinct previously developed instruments: (1) Faculty Stress Index (Gmelch, Wilke & Lovrich, 1984), reliability = .83; (2) Minnesota Job Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967), reliability = .92; and (3) Framingham Type A Scale (Haynes et al., 1978), reliability = .70). A fourth part of the survey questionnaire, which was validated for face and content validity using a panel of experts in higher education, provided demographic background information. Reliability coefficients (Cronbach's alpha) calculated using data collected for this study revealed the following reliabilities:

(1) Faculty Stress Index, Cronbach's alpha = .94.

(2) Minnesota Job Satisfaction Questionnaire, Cronbach's alpha = .87.

(3) Framingham Type A Scale, Cronbach's alpha = .76.

Data Source

Data were collected from a target population of all full-time faculty at the 14 Pennsylvania two-year community colleges. A random sample of 325 individuals was selected

(Krejcie & Morgan, 1970). A final response rate of 61.4% (N=200) was obtained. Data were collected by following Dillman's (1978) total design method (TDM).

An independent t-test was utilized to check for differences between early and late respondents' responses (Miller & Smith, 1983) for both the stress index and the job satisfaction scale. No significant differences were found in the responses for early and late respondents. An examination of background characteristics between early and late respondents utilizing X^2 procedures revealed no significant associations between respective background characteristics and whether the respondent was classified as an early or late respondent.

Results

Major Sources of Level of Stress

The Faculty Stress Index (Gmelch et al., 1984) was made up of a 46-item scale. The composite stress index results (Figure 3) reveal that a small percentage of community college faculty experienced high stress levels (12%) while 88% experienced moderate to low stress levels. Table 1 contains the composite stress index mean score (97.1) which falls below the theoretical midpoint of 115 of the total stress scale which had a possible range of 0 to 230. The actual range of scores on the stress index ranged from a low of 29 to a high of 186.

The total stress index was factor analyzed to identify major subparts or components of stress for the community college faculty. Polit and Hungler (1978) stated that "the major purpose of factor analysis is to reduce a large set of variables into a smaller, more manageable set of measures. Factor analysis disentangles complex interrelationships among variables and identifies which variables go together as unified concepts" (p. 384).

A principal component varimax solution (rotation) factor analysis was used to determine the major distinct dimensions. An Eigenvalue criterion, which represents values equal to the sum of the squared weights of each factor, was used to determine the factors. Retention of factors was based on a minimum contribution of approximately five to the total common variance by the respective factor and the principle of discontinuity. "According to this

procedure, a sharp drop in the percentage of explained variance indicates the appropriate termination point" (Polit & Hungler, 1978, p. 585).

The analysis resulted in the retention of four primary stress factors identified in Table 2. The four factors consisted of individual statements with a minimum rotated factor loading of .4. The first factor (stressor) accounted for 28% of the relative variance. The items loading on the first factor pertain to the concept of job demand stress. The second factor (institutional influences) accounted for 6.5% of the relative variance. The third factor, accounting for 5.7% of the relative variance, reflected the dimensions of community service expectations. The fourth factor, accounting for 4.4% of the relative variance, reflects role conflict. These four factors in combination accounted for 44.6% of the total stress variance. No other factor contributed four or more percent to the total variance.

Information in Table 1 reveals faculty generally had moderately low to moderate levels of stress for each of the four major stressors. For each of the four major stress factors, the actual mean was lower than the respective factor's theoretical midpoint. Faculty generally did not reflect, when considered as a composite faculty, high levels of stress.

Differences in Stress by Gender

When examining differences in stress levels by gender, significant differences were found only for the factor, job demand stress and for overall stress (total stress index, Table 3). Female faculty members did have significantly higher levels of overall stress than did males ($t = -2.34$, $p = .02$). However, in qualitative terms, we find that operationally this translates into females expressing a moderate level of stress and males expressing slightly lower levels of stress.

When we examine differences in stress levels for the four major stressors by gender, a significant difference is found only for job demand stress ($t = -2.98$, $p = .003$). Female faculty do express a slightly higher level of job demand stress than do males. Again as with overall stress, both males and females basically reflect moderate levels of job demand stress.

Tenure Status and Stress

Brown et al.(1984) suggested that faculty stress be examined within the context of tenure status. A twoway ANOVA was used to examine the interactive effects and the main effects for gender and tenure status. The rationale for examining this combination of factors was that a greater proportion of female faculty members in Pennsylvania community colleges tended not to be tenured as compared to the proportion of male faculty who had attained tenure. The results revealed no significant interactive effects ($p>.05$) between gender and tenure status on stress level. A significant main effect for tenure status was found for job demand stress (Tables 4 and 5). Non-tenured faculty (both male and female) had significantly higher job demand stress levels than did tenured faculty. There were significant main effects for gender when considering the total stress index and job demand stress. This is not surprising since the t-test used in the earlier analysis (previous section) reflected the same information for job demand stress and the total stress index.

Stress Differences by Discipline Area

Biglan's classification framework for the "hard" and "soft" academic departments was used to group faculty members' academic departments. The results (Table 6) indicate no significant differences regarding overall stress, job demand stress, institutional influence stress, community service role related stress and role conflict stress.

Stress Differences by Personality Type

The work of Cooper (1981), Melendez and deGuzman (1983) and Israel (1989) suggested that certain personality types are "stress seekers" and respond to stress in different ways. Responses to the Framingham Type A Scale were used to classify persons as having a greater Type A orientation or a greater Type B orientation. The literature indicates people may in reality reflect combinations of Type A and B orientations (characteristics). Discussions with an industrial psychologist suggested that we further examine the differences in stress levels by simultaneously considering personality type (A or B) and gender. Information in Table 7

reveals that there were no significant interactions between gender and personality type nor were there significant main effects for the variable gender for any of the stressors. There were significant differences for personality type when examining overall stress level (total stress index) and the four factors (stressors). Faculty with a Type A orientation had significantly higher stress levels than did faculty with a Type B orientation.

Job Satisfaction

The Waldman and Spangler (1989) framework for job performance identifies outcomes such as job and personal satisfaction as individual outcomes resulting from being involved in a career or job. Faculty job satisfaction was measured using the Minnesota Job Satisfaction Questionnaire. The results indicate Pennsylvania community college faculty were somewhat neutral in their perceptions of job satisfaction. The average job satisfaction value was 72 (s = 10.4) as measured on the scale which theoretically could range from a low of 21 to a high of 105 (21 statements with a Likert-type scale of 1-5). The average job satisfaction value of 72 thus was slightly above the job satisfaction scale's theoretical midpoint of 68. Faculty were neither greatly satisfied nor dissatisfied with their job.

Multiple regression was used to examine the influence of selected factors on faculty members' perceptions of overall job satisfaction. The framework of the stress process presented by Israel et al. (1989) and the model proposed by Igodan and Newcomb (1986) were used in identifying variables for inclusion in the regression model. The primary focus of the regression model presented here is to examine the simultaneous influence of a person's overall stress level with selected sociodemographic characteristics on overall job satisfaction. In the context of Igodan and Newcomb, the variables included relate to the larger set of variables labeled a person's individuality and the environment's stressors. Of special interest in this model was the influence of gender, tenure status, personality orientation (Type A or B) and perceived level of stress.

Means, standard deviations and regression results appear in Table 8. Three variables--total stress level, gender, and the first-order interaction of academic department x gender--were found to be statistically significant components of the model (overall model $F = 8.63$, $p < .001$). The most parsimonious model, which included the three factors identified previously plus the variable academic department classification because it was a component of the first-order interaction, accounted for a relatively small amount (15.2%) of the variance in overall job satisfaction. Two of the factors--gender and total level of stress--influenced in a negative manner overall job satisfaction. Specifically with regard to gender, being a female tended to influence job satisfaction in a negative manner. Further examination of the first-order disordinal interaction revealed that females in the "soft" discipline areas had higher levels of overall job satisfaction than females in the "hard" discipline areas and males in the "soft" or "hard" disciplines.

Results from the regression analysis for this group of community college faculty, with regard to the influence of gender on job satisfaction, are counter to Milosheff's (1990) findings for a national sample of community college faculty who reported information in 1984. The finding relative to the level of perceived overall stress and overall job satisfaction has been substantiated in prior studies.

Of special interest was the extent to which the regression results provided support for the model proposed by Israel et al. (1989) and the model suggested by Igodan and Newcomb (1986). The regression results provide some support for the environmental dimension and the individual dimension identified by Igodan and Newcomb as contributors to job satisfaction and ultimately job burnout. The statistically significant interaction between gender and academic department (based on Biglan's classification of "hard" and "soft" departments) provides limited support for Igodan and Newcomb's model identifying the importance of individual and environmental dimensions in the job burnout model. Within the context of the Israel et al. (1989) stress process framework, some support was provided for the influence of psychological-environmental conditions and their identified biophysical and social support

modifying variables. It must be emphasized that the current study does not include information relative to all components of the Israel et al. stress process model. Thus it would be unfair to judge the appropriateness of their model for community college faculty. It must be emphasized that certain aspects of their model examined in this study were substantiated for community college faculty.

General Implications

The results indicated that generally the community college faculty in Pennsylvania appear to be fairly neutral relative to their overall job satisfaction. The relationship of gender to job satisfaction indicated a significant relationship wherein females had lower levels of job satisfaction. For community college administrators and staff development officers, these results could provide a means for supporting staff development programs and inservice activities that deal with sex equity and gender issues in the college workplace. It is recommended that workshops, inservice programs, and support groups be established that may address women's issues such as career pressures, family, child care, time demands, professional relationships, and attitudes of colleagues.

When reviewing the data on stress levels by gender, significant differences were found for the stressor, job demand. Female faculty expressed a slightly higher level of job demand stress than their male counterparts. Components of job demand, such as heavy workload, number of classroom presentations, lack of quality professional time and administrative duties, appear to present slightly more stressful situations for female faculty which may impact on their ability to perform their jobs effectively. "To allow faculty to deal effectively with the complexities of their jobs and its demands, the time will have to come for reconceptualizing their role and their relationship with students. To accomplish this may require more courage than the fight to resist increasing teaching loads" (Seidman, 1987, p. 44). The following are suggested strategies designed to help administrators address issues of high job demand placed on faculty.

1. Assist faculty through time management training. This training should emphasize planning, organization skills, and management of daily workload. It should also help new faculty as well as experienced faculty to prioritize responsibilities and duties based on the effective use of time.

2. Reconceptualize the emphasis on student-centeredness to be quality student time. This process would reduce the emphasis on the care of the total student and refocus faculty responsibility on teaching and learning.

3. Provide time for high pay-off (HIPO) (Gmelch, 1987) activities, while at the same time reducing the less meaningful activities. Develop more efficient administrative management and governance structures that provide for well-structured meetings with a focused agenda. Limit outside of classroom time by setting reasonable limits on committee assignments and community service activities.

4. Establish instructional support units (ISUs) to help faculty with routine paperwork and phone interruptions. Faculty need to reduce their clerical duties to provide more quality time for instructional development activities.

5. Provide for the equitable distribution of teaching loads to include periodic release time for instructional development and curriculum planning. A system of reward and recognition should be established that provides incremental pay incentives and sabbatical leave to encourage professional development and intellectual pursuits.

6. Structure a governance system that not only allows information to flow from the top down, but also from the faculty upward. A system of information sharing and clear, open lines of communication should be established that incorporates a team management approach.

It is recommended that community college administrators address the dynamics of intervening environmental factors (e.g., work overload, job demands) on personality. The concept of staff development should be broadened to include concerns for the personal needs and the stress problems of faculty.

The individual oriented toward a Type A personality may find that his/her interpretation of environmental stimuli enhances the characteristics of such (Type A) behavior. In moderation this may be desirable, but in a high-pressure environment the threshold level may increase rapidly towards the stress risk level. Israel (1989) referred to these as the levels of perceived stress which, in the short term, lead to a strain response and, in the long term, an enduring outcome such as heart disease or death.

In this study when examining overall stress and the four factors (stressors) the researchers found significant differences for personality type. Faculty with a Type A orientation had significantly higher stress levels than did faculty with a Type B orientation. Community college personnel should provide programs for faculty which address the sources of stress and how to cope with those sources of stress. The following are specific suggestions for faculty to help them reduce the levels of stress and manage its effects.

1. Share your feelings with others and discuss conditions that seem to cause increased stress. Try to put the situation into a larger context and less personal perspective.

2. Make sure that you get plenty of exercise, rest, and eat well-balanced meals on a regular schedule.

3. Perform a self-evaluation to identify what stress stimulates your performance and identify the type and levels of stress that seem to cause increased anxiety.

4. Try to understand your limitations for stress and the threshold point at which your performance seems to decline.

5. Do not be afraid to change course, take regular work breaks, and allow for high-quality personal time.

6. Take on projects that are stimulating, challenging, and professionally rewarding.

7. Set realistic goals and objectives that do not exceed your capacity to achieve them.

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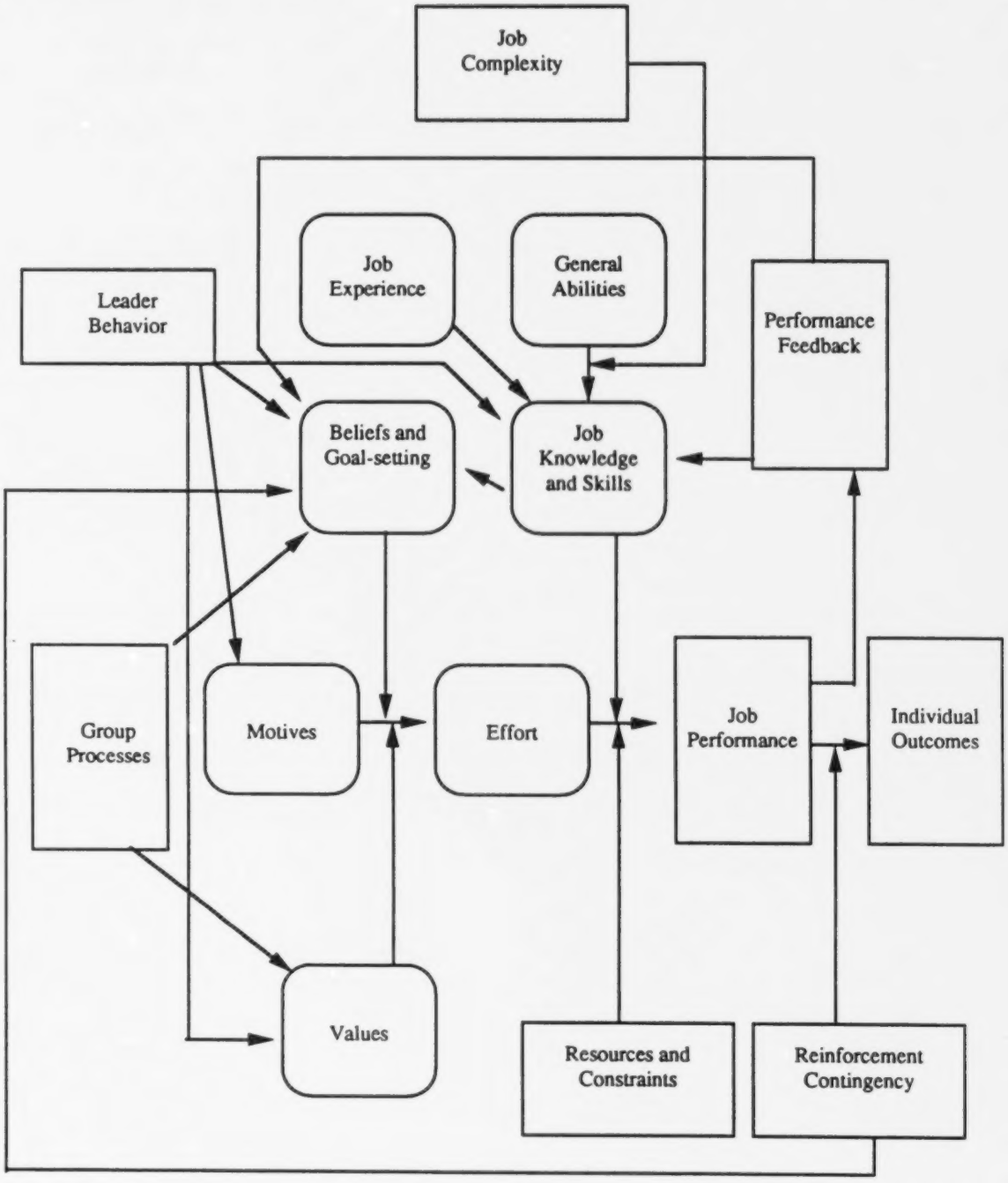

Figure 1. An Integrated Model of the Determinants of Job Performance.
Note: From "A Closer Look at the Determinants of Job Performance" by D. A. Waldman and W. D. Spangler, 1989, Human Performance.

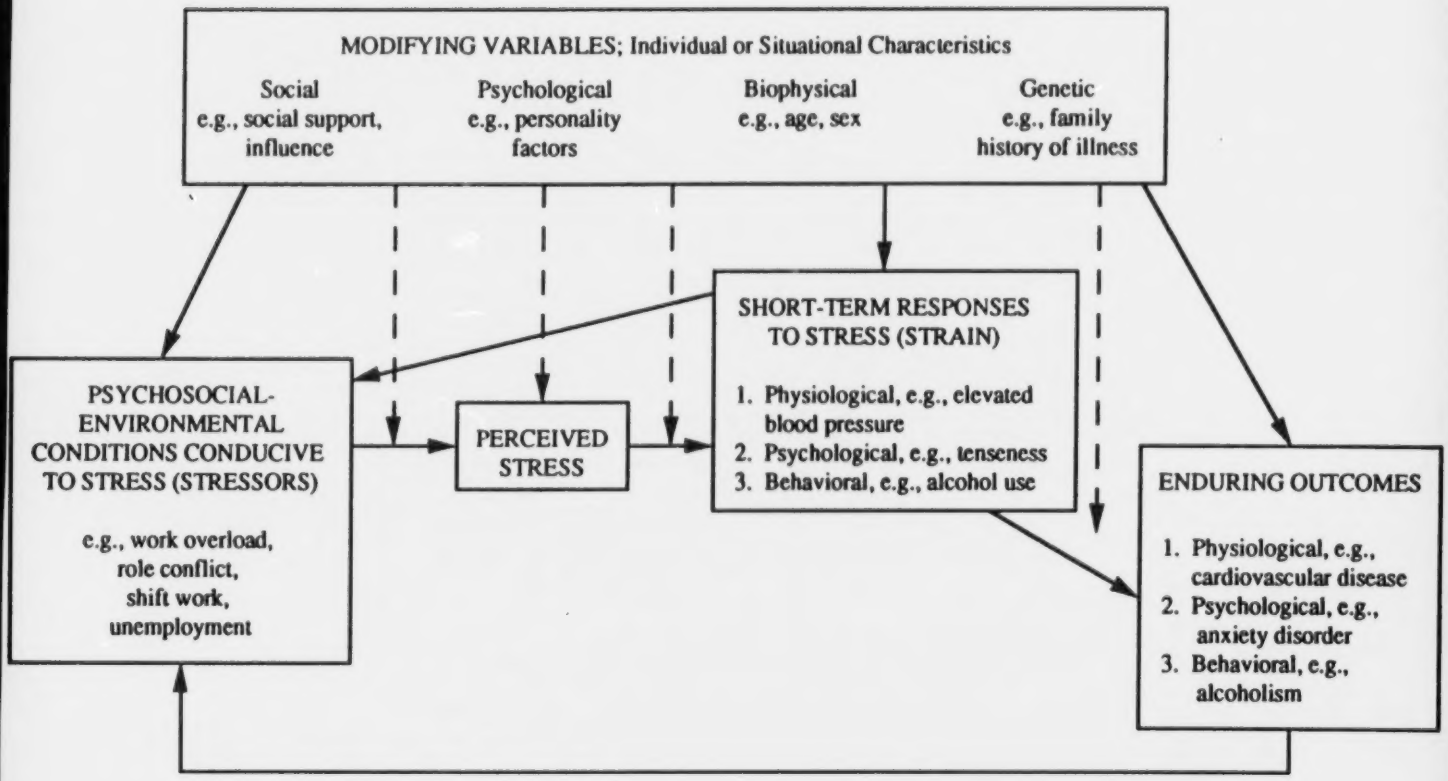

Figure 2. Conceptual Framework of the Stress Process.

NOTE: From "Action Research on Occupational Stress: Involving Workers as Researchers" by B. A. Israel, S. J. Schurman, and J. S. House, 1989, International Journal of Health Services, 19, p. 137.

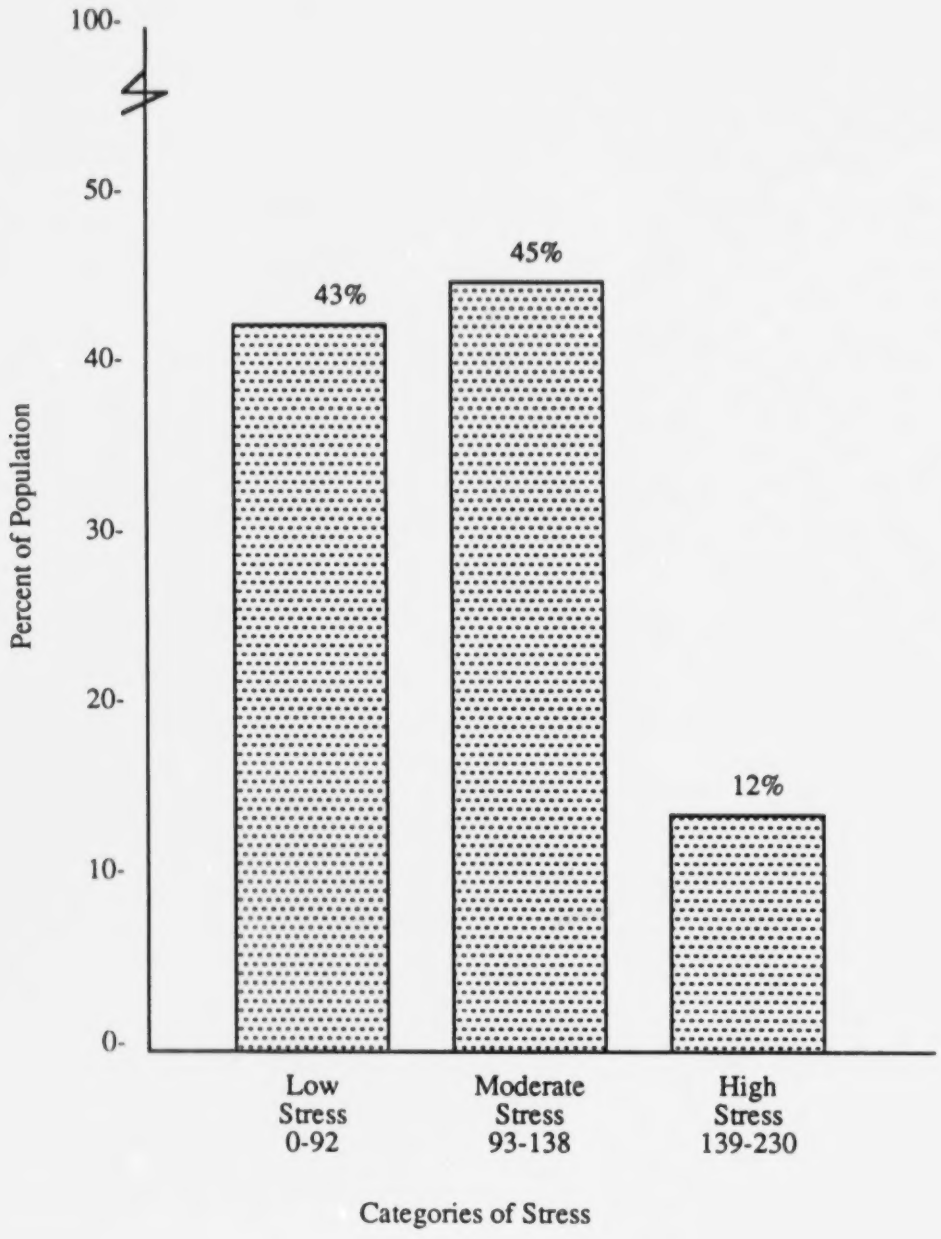

Figure 3. Distribution of Population Stress Levels Based on Operational Categories.

Table 1. Means, Standard Deviations and Range for the Overall Stress Level and the Four Primary Stress Factors.

Stressor	n	$\bar{x}$	S.D.	Range Low	Range High
Total Stress Index	193	97.1	32.3	24	186
Factor 1--Job Demand Stress	194	14.4	6.5	2	30
Factor 2--Institutional Influence Stress	194	18.8	8.2	0	36
Factor 3--Community Service Role Stress	193	7.2	4.8	0	23
Factor 4--Role Conflict Stress	196	9.4	4.7	0	22

Note: Theoretically values for the stressors could have a range as described below:
Total stress index (0-230, theoretical midpoint = 115)
Factor 1--Job demand stress (0-30, theoretical midpoint = 15)
Factor 2--Institutional influence stress (0-40, theoretical midpoint = 20)
Factor 3--Community service (0-25, theoretical midpoint = 12.5)
Factor 4--Role conflict (0-25, theoretical midpoint = 12.5)

Table 2. Interpretation of Final Stress Factors.

Factor	Abstracted Instrument Statement	Varimax Factor Loading
Factor 1. Job Demand		
V68	Time for teaching preparation	.76
V74	Heavy workload and can't finish work during normal day	.74
V78	Making classroom presentations	.73
V89	Job demands interfere with other personal activities	.67
V83	Teach subjects for which not sufficiently prepared	.66
V57	Insufficient time to keep abreast of developments in my field	.55
Factor 2. Institution Influences		
V79	Try to influence actions/decisions of my supervisor which affect me	.71
V81	Resolve differences with supervisor	.69
V82	Conflict among institutional, department and personal goals	.69
V86	Not knowing how supervisor evaluates me	.62
V85	Having no impact on institutional decision making	.59
V67	Insufficient reward for service	.47
V59	Career progress not what it should be	.46
V87	Inadequate salary	.41
Factor 3. Community Service Expectations		
V63	Requested to provide community service	.81
V80	Unclear criteria for evaluating community service	.75
V48	meeting social obligations expected of my position	.57
V54	Inadequate college recognition for community service	.53
V73	Insufficient time for community service	.45
Factor 4. Role Conflict		
V90	Drawn into conflict between colleagues	.80
V56	Resolving differences with fellow faculty	.73
V60	Assigned duties which take me away from my office	.49
V66	Unclear regarding scope and job responsibilities	.42
V58	Insufficient authority to perform my responsibilities	.43

Table 3. T-Test Results for Gender Differences in Stress Levels.

Stress and Gender	n	$\bar{x}$	S.D.	t	p
Overall Stress					
Male	108	92.4	30.7	-2.34	.020
Female	85	103.2	34.1		
Job Demand Stress					
Male	113	13.2	6.1	-2.98	.003
Female	81	15.9	6.7		
Institutional Influence Stress					
Male	111	18.2	8.1	-.1.12	.264
Female	83	19.5	8.2		
Community Service Stress					
Male	112	6.9	4.7	-1.24	.217
Female	81	6.7	4.8		
Role Conflict Stress					
Male	113	8.9	4.6	-1.53	.127
Female	83	10.0	4.8		

Table 4. Means and Standard Deviations for Stress Levels by Faculty Tenure Status and Gender.

Tenure Status	Male n	Male x	Male S.D.	Female n	Female x	Female S.D.
Total Stress Index						
Tenured	90	91.0	30.3	65	103.3	35.5
Not tenured	24	98.5	32.5	20	102.9	29.7
Factor 1 Job Demand Stress						
Tenured	89	12.6	5.5	61	15.2	6.8
Not tenured	24	15.7	7.8	20	18.2	5.9
Factor 2 Institutional Stress						
Tenured	88	18.1	7.9	63	19.8	8.3
Not tenured	23	18.7	9.1	20	18.7	8.7
Factor 3 Community Service						
Tenured	89	6.9	4.6	61	7.7	4.8
Not tenured	24	6.8	5.1	20	7.9	5.1
Factor 4 Role Conflict						
Tenured	89	8.6	4.4	63	10.2	5.1
Not tenured	24	10.4	5.2	20	9.4	3.6

Note: Twoway ANOVA was used to examine for the interactive effects of tenure and gender. No significant interactive effects (alpha $\leq .05$) were found.

Table 5. Twoway ANOVA Results for Gender and Tenure Status on Job Demand Stress.

Source	df	SS	MS	F	p
Gender	1	26.3	264.3	6.75	.011
Tenure Status	1	297.1	297.1	7.48	.007
Gender x Tenure Status	1	1.2	1.2	0.03	.860
Total	191	7827.9	42.3		

Table 6. T-Test Results for Differences in Stress by Discipline Area.

Stress and Discipline Area	n	x	S.D.	t	p
Overall Stress					
Soft Science	121	97.1	33.3	.01	.988
Hard Science	78	96.9	31.8		
Job Demand Stress					
Soft Science	117	14.3	6.6	-.10	.921
Hard Science	77	14.4	6.2		
Institutional Influence Stress					
Soft Science	117	18.6	8.5	-.47	.638
Hard Science	77	19.2	7.8		
Community Service Stress					
Soft Science	117	7.2	4.4	-.20	.842
Hard Science	78	7.3	5.3		
Role Conflict Stress					
Soft Science	121	9.6	4.8	.47	.637
Hard Science	75	9.2	4.6		

Table 7. Twoway ANOVA Results for Gender and Personality Type on Stress.

Source	df	SS	MS	F	p
Total Stress Index					
Gender	1	1363.5	1363.5	1.48	.226
Personality	1	24437.4	24437.4	26.49	.001
Gender x Personality	1	637.4	637.4	.69	.407
Job Demand Stress					
Gender	1	142.4	142.4	3.92	.059
Personality	1	839.2	839.2	23.08	.001
Gender x Personality	1	14.5	14.5	.40	.528
Institution Related Stress					
Gender	1	7.4	7.4	.12	.733
Personality	1	576.6	576.6	9.06	.003
Gender x Personality	1	87.4	87.4	1.37	.243
Community Service Role Stress					
Gender	1	6.1	6.1	.28	.596
Personality	1	211.7	211.7	9.74	.002
Gender x Personality	1	25.2	25.2	1.16	.283
Role Conflict					
Gender	1	13.6	13.6	.64	.425
Personality	1	192.4	192.4	8.99	.003
Gender x Personality	1	6.1	6.1	.29	.592

Table 8. Summary of Regression Analysis of Overall Job Satisfaction on Selected Variables.

Variable	Mean	S.D.	B	Beta	Partial Corr	T	p
Personality Index	22.3	6.4	-.20	-.11	-.10	-1.40	.161
Total Stress Index	97.1	32.7	-.11	-.29	-.28	-4.01	.001
Tenure Status	.2	.4	2.97	.10	.08	1.13	.261
Gender	.4	.5	-8.01	-.33	-.17	-2.34	.019
Academic Department Classification	.4	.5	-1.85	-.07	-.08	-1.12	.2263
Academic Department x Gender	2.8	3.8	1.04	.33	.17	2.35	.020
Tenure Status x Gender	.1	.3	-.55	-.01	-.01	-.14	.893

Regression summary information:

$R^2 = .152$
$F = 8.63$
$P = <.001$

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